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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* ALEXANDER G. MACINNIS,  
CHENGFUH JEFFREY TANG, and  
GREG A. KRANAWETTER

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Appeal 2007-4182  
Application 09/642,458  
Technology Center 2600

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Decided: March 25, 2008

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Before KENNETH W. HAIRSTON, JOSEPH L. DIXON, and  
ANITA PELLMAN GROSS, *Administrative Patent Judges*.

DIXON, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1-3, 5-39, 41, 49, 51, 53, and 54. We have jurisdiction under 35 U.S.C. § 6(b).  
We REVERSE.

## BACKGROUND

Appellants' invention relates to video and graphics system with an integrated system bridge controller to couple the host CPU with peripheral devices (Spec. 2). An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A system on a single integrated circuit chip comprising:
  - an MPEG Transport processor for receiving a plurality of MPEG Transport streams, at least one of the MPEG Transport streams including MPEG video data;
  - an MPEG video decoder for decoding the MPEG video data using an external memory to generate video for displaying;
  - a display engine for processing graphics to be blended with the video using the external memory; and
  - a system bridge controller having a north bridge function disposed between a CPU and a plurality of peripheral devices for coupling the CPU to the plurality of peripheral devices,
- wherein the MPEG video decoder, the display engine and the system bridge controller are implemented on the single integrated circuit chip,

wherein the plurality of peripheral devices are situated externally to the single integrated circuit chip, and

wherein the external memory has a unified memory architecture, such that the external memory is concurrently used by the CPU through the system bridge controller as at least a part of its main memory, the display engine for processing the graphics, and the MPEG decoder for decoding the MPEG video data.

#### PRIOR ART

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

So	US 5,909,559	Jun. 01, 1999
Yee	US 6,466,581 B1	Oct. 15, 2002
		(filed Aug. 03, 1998)

#### REJECTIONS

Claims 1, 5, 6, 9-11, 14-17, 20-22, 24, 26, 27, 30-32, 35, 36, 39, 41, 50, 51, 53, and 54 are rejected under 35 U.S.C. § 102(e) as being anticipated by So. Claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over So. Claims 2, 3, 7, 8, 12, 13, 18, 19, 23, 25, 28, 29, 33, 34, 37, 38, and 49 are rejected under 35 U.S.C. § 103(a) as being unpatentable over So in view of Yee.

Rather than reiterate the conflicting viewpoints advanced by the Examiner and Appellants regarding the above-noted rejection, we make reference to the Examiner's Answer (mailed October 20, 2006 ) for the reasoning in support of the rejections, and to Appellants' Brief (filed July

26, 2006) and Reply Brief (filed November 29, 2006) for the arguments thereagainst.

### OPINION

In reaching our decision in this appeal, we have given careful consideration to Appellants' Specification and claims, to the applied prior art references, and to the respective positions articulated by Appellants and the Examiner. As a consequence of our review, we make the determinations that follow.

#### 35 U.S.C. § 102

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). Analysis of whether a claim is patentable over the prior art under 35 U.S.C. § 102 begins with a determination of the scope of the claim. We determine the scope of the claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). The properly interpreted claim must then be compared with the prior art.

"It is well settled that a prior art reference may anticipate when the claim limitations not expressly found in that reference are nonetheless inherent in it. Under the principles of inherency, if the prior art necessarily

functions in accordance with, or includes, the claimed limitations, it anticipates.” *In re Cruciferous Sprout Litig.*, 301 F.3d 1343 (Fed. Cir. 2002) (citations and internal quotation marks omitted). “Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (citations and internal quotation marks omitted).

“[A] prima facie case of anticipation [may be] based on inherency.” *In re King*, 801 F.2d 1324, 1327 (Fed. Cir. 1986). Once a prima facie case of anticipation has been established, the burden shifts to the Appellant to prove that the prior art product does not necessarily or inherently possess the characteristics of the claimed product. *In re Best*, 562 F.2d 1252, 1255 (CCPA 1977) (“Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product.”). *See also In re Spada*, 911 F.2d 705, 708-09 (Fed. Cir. 1990).

Appellants argue independent claims 1, 22, and 41 together (Reply Br. 10). Therefore, we will select independent claim 1 and address Appellants’ arguments thereto. Appellants argue that the Examiner has misdefined or misinterpreted the MPEG transport processor and MPEG transport streams. (Reply Br. 11-13). Appellants contend that the Examiner has misinterpreted prior statements and Appellants have not defined an MPEG broadcast as an

MPEG transport. (Reply Br. 12). Appellants argue that even if the So reference teaches a single integrated chip 510 that receives and decompresses all MPEG data streams, it does not follow nor is it inherent that the So reference teaches "receiving a plurality of MPEG Transport streams." While an MPEG transport stream may include MPEG video data, not all MPEG video data is carried by an MPEG transport stream, nor is an MPEG transport stream required for a compression/decompression of all MPEG audio/video data (Reply Br. 13).

We agree with Appellants that the Examiner has not clearly shown that all MPEG broadcasts are MPEG transport streams, and we do not find that Appellants have admitted such a correlation between the two terms.

Additionally, Appellants argue that the So reference does not teach the recited "MPEG video decoder, the display engine and the system bridge controller are implemented on the single integrated circuit chip" as recited in independent claim 1 (Reply Br. 14). Appellants argue that even if the So reference's teaching of a "set top box" included in "MPEG transport processor", the So reference does not teach that the "MPEG transport processor" would be included in the "single integrated circuit" that also comprises the "MPEG video decoder", "display engine", and "system bridge controller" (Reply Br. 14). Appellants argue that integrating the CPU and Northbridge, and integrating the Northbridge and MPEG compression/decompression or even "virtualizing many major hardware elements onto a single Northbridge die" does not teach the claimed "MPEG Transport processor" included on the single integrated circuit that comprises

the MPEG video decoder, the display engine and the system bridge controller (Reply Br. 14-15).

We agree with Appellants that the teachings of the So reference do not explicitly show all of the recited claimed elements embodied on a single integrated circuit. While figures 3-6 of the So reference show various circuit elements embodied on a single integrated circuit and may be fairly suggestive of a desire to implement various combinations of elements as a single integrated circuit, we do not find such an explicit teaching for anticipation as recited in independent claim 1.

The Examiner relies upon the teachings of the So reference at columns 132-133 to teach the recited elements on a single integrated chip (Ans. 14-17). From our review of the relied upon teachings of the So reference, we do not find a clear teaching of the presence of the recited elements on a single integrated chip. Therefore, we cannot sustain the rejection of independent claim 1 under anticipation based solely upon the So reference. Therefore, we cannot sustain the rejection of independent claim 1 and its respective dependent claims.

Additionally, we note that independent claim 22 specifically recites the functions are implemented on the same integrated circuit chip which is separate from the peripheral devices and in independent claim 41, the claim recites that the MPEG transport processor, MPEG video decoder and the system bridge controller are implemented on the single integrated chip and that the peripherals are situated externally to the integrated chip. Therefore, we do not find that the So reference teaches the limitations as recited in



independent claims 22 and 41. Therefore, we cannot sustain the rejection of these claims and their respective dependent claims.

35 U.S.C. § 103

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). “[T]he Examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Furthermore, “‘there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness’ . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007)(quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

With respect to dependent claim 15, we cannot sustain the rejection of this claim based upon the Examiner’s rationale at page 12 of the Answer since we do not find a proper initial showing by the Examiner of all the recited elements of dependent claim 15.

Similarly with respect to dependent claims 2, 3, 7, 8, 12, 13, 18, 19, 23, 25, 28, 29, 33, 34, 37, 38, and 49, we do not find that the Examiner's reliance upon the teachings of the Yee reference remedies the deficiency noted above with respect to the So reference. Therefore, we do not find the Examiner has set forth a proper initial showing of obviousness based upon the So reference alone or in combination with the Yee reference.

#### CONCLUSION

To summarize, we have reversed the rejection of claims 1, 5, 6, 9-11, 14-17, 20-22, 24, 26, 27, 30-32, 35, 36, 39, 41, 50, 51, 53, and 54 under 35 U.S.C. § 102, and we have reversed the rejection of claims 2, 3, 7, 8, 12, 13, 15, 18, 19, 23, 25, 28, 29, 33, 34, 37, 38, and 49 under 35 U.S.C. § 103(a).

REVERSED

Appeal 2007-4182  
Application 09/642,458

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